

## PATENT COOPERATION TREATY

## PCT

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**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>2020821PC/ko</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/FI 2003/000520</b>	International filing date (day/month/year) <b>26-06-2003</b>	Priority date (day/month/year) <b>27-06-2002</b>
International Patent Classification (IPC) or national classification and IPC <b>H04L 12/28</b>		

## Applicant

**NOKIA CORPORATION ET AL**

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a.  (*sent to the applicant and to the International Bureau*) a total of 1 sheets, as follows:

sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b.  (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand <b>05-11-2003</b>	Date of completion of this report <b>30-09-2004</b>
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer <b>Ralf Boström /LR</b> Telephone No. +46 8 782 25 00

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/FI 2003/000520

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

international search (under Rules 12.3 and 23.1(b))  
 publication of the international application (under Rule 12.4)  
 international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

the international application as originally filed/furnished

the description:

pages 1 - 10 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages 12 - 16 as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* 11 received by this Authority on 22 - 06 - 2004

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages 1 - 2 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to the sequence listing (specify): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to the sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/FI 2003/000520

**Box No. V** **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	<u>1-30</u>	YES
	Claims	<u>---</u>	NO
Inventive step (IS)	Claims	<u>5-8</u>	YES
	Claims	<u>1-4, 9-30</u>	NO
Industrial applicability (IA)	Claims	<u>1-30</u>	YES
	Claims	<u>---</u>	NO

**2. Citations and explanations (Rule 70.7)**

This report concerns the new claims which were received on 24 June 2004.

The present application is concerned with a problem how to establish communications groups in a wireless network in a fast and efficient way.

Documents cited in the International Search Report:

- D1. WO 0111830 A1
- D2. WO 0223818 A2
- D3. WO 0235867 A1

D1, which is considered to represent the most relevant state of the art, discloses a method for controlling talk groups in a wireless network. According to D1 a master terminal can set up multiple groups, called talk groups, of slave terminals. A group communication is initiated by the master who polls the slaves and receives responses (communication requests) from those slaves that wish to participate in group communication. The master then designates communication parameters for communication between slaves that are to communicate in a communication group (see abstract and page 4, line 7-23). The slaves acknowledge the assigned parameters. The acknowledgement step is necessary since there may be slaves that are incapable of communicating at the assigned parameters.

D2 and D3 are background art documents and are not considered to be of any particular interest.

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/FI 2003/000520

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 7 which refers to all preceding claims refers to "the file for the request". This file is only disclosed in claims 5 and 6. Thus, claim 7 should only refer to claims 5 and 6.

Claim 8 which refers to all preceding claims refers to "the file for the request". This file is only disclosed in claims 5-7. Thus, claim 8 should only refer to claims 5-7.

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of Box V

Claims 1, 2, 21, 22, 25 and 26:

The polling messages in D1 correspond to the master's requests in the application. The slaves' communication requests in D1 correspond to the slave user responses in the application. The transmission of communication resource parameters in D1 correspond to the master's sending of information to the network in the application.

The invention differs from D1 in that the slaves' responses include user information for group establishment. This feature is not disclosed in D1. However, the messages that are sent from the slaves to the master unit, in D1, must at least contain the slaves' identities (which are a kind of user information), if the master are to establish communication groups. Thus, the messages in D1 are considered to include user information for group establishment. The fact that a user terminal can act as a master is considered obvious to the skilled person (this is normal in short range wireless networks, for example Bluetooth). According to the discussion above the invention according to the independent claims 1, 2, 21, 22, 25 and 26 is considered to lack novelty.

Claims 3, 12 and 13:

These claims state that either multicasting or broadcasting is used for transmitting the request from the master. It is well known that multicasting and broadcasting are efficient methods for reaching several users simultaneously in a communications network. It is therefore obvious to the skilled person to distribute the master's requests using multicasting/broadcasting. Thus, the invention according to claims 3, 12 and 13 lacks an inventive step.

Claims 9, 10, 23, 24 and 27:

These claims suggest that different short-range wireless technologies (Bluetooth, wireless LAN etc.) are used in the communications network. The communications network in D1 is based on Bluetooth. Thus, the invention according to claims 9, 10, 23, 24 and 27 is considered to lack an inventive step.

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of Box V

Claims 11 and 14:

These claims state that the master selects an identification to be used in the information exchange. This identification can be a MSISDN number. As discussed above it is obvious to the skilled person to include identifications of the slaves in the communication between the master and the slaves. Since the MSISDN number is used for identifying mobile devices the skilled person would use this number as identification. Thus, the invention according to claims 11 and 14 is considered to lack an inventive step.

Claim 17:

This claim state that the master equipment's requests are sent periodically on the communications network. The master unit's polling scheme in D1 is a periodical transmission of requests. Thus, the invention according to claim 17 is lacking an inventive step.

Claims 4, 15, 16, 18-20, 28-30:

These features of claims 4, 15, 16, 18-20, 28-30 are regarded as measures obvious to a person skilled in the art. Thus, the invention according to claims 4, 15, 16, 18-20, 28-30 is considered to lack an inventive step.

**Claims**

1. A method of establishing a communications group in a communications network comprising user equipments, **characterized** by comprising:

5 sending (2-4, 2-5) a request from master user equipment (UEA) to at least one slave user equipment (UEB, UEC) over a communications medium, preferably a short-range communications medium, said request prompting the user of the slave user equipment (UEB, UEC) to send user information for group establishment in the communications network;

10 at least one slave user equipment (UEB, UEC) sending a response (2-8, 2-12) comprising user information for group establishment, over the communications medium to the master user equipment (UEA);

15 the master user equipment (UEA) creating or modifying the group based on the information received in responses from the at least one slave user equipment (UEB, UEC); and

the master user equipment (UEA) sending the information on the created or modified group to the network for establishing said group.

2. A method of establishing a communications group in a communications network, **characterized** by comprising:

20 sending (2-4, 2-5) a request from master user equipment (UEA) to at least one slave user equipment (UEB, UEC) over a communications medium, preferably a short-range communications medium, said request prompting the user of the slave user equipment (UEB, UEC) to send user information for group establishment in the communications network;

25 at least one slave user equipment (UEB, UEC) sending over the communications medium a response (2-8, 2-12) comprising user information for group establishment to the master user equipment (UEA) for communication in the communication network;

30 the master user equipment (UEA) creating or modifying the group based on the information received in responses from the at least one slave user equipment (UEB, UEC); and

the master user equipment (UEA) sending the information on the created or modified group to all members of the group over the communications medium.

35 3. A method according to claim 1 or 2, **characterized** in that the request and /or the response is one of the following: a multicast request, a



ARIPO patent (SZ), ARIPO utility model (TZ), ARIPO patent (TZ), ARIPO utility model (UG), ARIPO patent (UG), ARIPO utility model (ZM), ARIPO patent (ZM), ARIPO utility model (ZW), ARIPO patent (ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— of inventorship (Rule 4.17(iv)) for US only

**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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VIII-4-1	<p><b>Declaration: Inventorship (only for the purposes of the designation of the United States of America)</b>            Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv) for the purposes of the designation of the United States of America):</p>	<p>I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.</p> <p>This declaration is directed to international application No. PCT/FI03/00520 (if furnishing declaration pursuant to Rule 26ter)</p> <p>I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.</p> <p>I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.</p>
VIII-4-1 -1	Prior applications:	20021259, FI, 27 June 2002 (27.06.2002)

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<p>I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.</p> <p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>	
VIII-4-1 -1-1 VIII-4-1 -1-2 VIII-4-1 -1-3 VIII-4-1 -1-4 VIII-4-1 -1-5	Name:  <b>MYYRY, Matti</b>
	Residence: (city and either US State, if applicable, or country)  Mailing address:  <b>Tampere, Finland</b>
	Citizenship:  <b>FI</b>
	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)  
	Date: (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)  <b>AUGUST 12, 2003</b>

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VIII-4-1 -2-1	Name:	WESTMAN, Ilkka
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VIII-4-1 -2-3	Mailing address:	Keuruuntie 3 - 13 E 21
VIII-4-1 -2-4	Citizenship:	FI SWEDEN
VIII-4-1 -2-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	
VIII-4-1 -2-6	Date: (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	AUGUST 4, 2003